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CPY - MITO

DC - E36 J01

DR - 0335-U 1784-U

FS - CPI

IC - B01D53/04 ; B01D53/34 ; B01D53/36

MC - E31-H01 J01-E02B J01-E02D N06-B

M3 - [03] A313 A351 A422 A423 A424 A428 A429 A940 B114 C108 M411 M730 M903 Q421

- [01] C107 C108 C307 C520 C730 C800 C801 C802 C803 C804 C807 M411 M750 M903 M904 M910 N163 N164 Q431 Q436; R01784-X; 1784-U

- [02] M210 M213 M231 M320 M416 M610 M620 M781 M903 M904 M910 N163 N164 Q431 Q436 Q508; R00335-R; 0335-U

PA - (MITO ) MITSUBISHI JUKOGYO KK

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XA - C1994-060426

XIC - B01D-053/04 ; B01D-053/34 ; B01D-053/36

AB - J06079137 NOx contained in a small amt. of around 5 ppm in air is removed from the air by adsorbing NOx to an adsorbent to obtain clean air free of NOx, and the adsorbed NOx which is concentrated in the adsorbent is desorbed to obtain desorbed gas. Hydrocarbon like propane gas is added to the desorbed gas and NOx contained in the desorbed gas is decomposed with a catalyst without ammonia addn. the resultant gas is heat-exchanged and returned back to step (1).

- ZSM-, Y-, or X-type zeolite ion-exchanged with Cu ions is suitably used as the NOx adsorbent. The NOx decomposing catalyst is a Cu ion-exchanged crystalline silicate with the compositional formula of  $(1.0+/-0.4)R_2O.(aM_2O_3.Al_2O_3).ySiO_2$ , where R is H+ or alkali metal ion, M is Gp. VIII element, rare earth metal, Ti, V, Cr, Ni or Sb,  $a+b = 1$ , a is at least 0, b is at least 0, y is above 12.

- USE/ADVANTAGE - Used to clean the air polluted with a small amt. of NOx around 5 ppm which is discharged from cars. A larger amt. of polluted air can be treated without ammonia addn. A higher efficiency of NOx decomposition can be obtd. by hydrocarbon addn.(Dwg.0/1)

CN - R01784-X R00335-R

DRL - 1784-U 0335-U

IW - DECOMPOSE AMOUNT NITROGEN OXIDE CONTAIN AIR ADSORB ADD PROPANE GAS EFFECT DECOMPOSE CATALYST NO AMMONIA HEAT EXCHANGE

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NC - 001

OPD - 1992-09-03

ORD - 1994-03-22

PAW - (MITO ) MITSUBISHI JUKOGYO KK

TI - Decomposing small amt. of nitrogen oxide contained in air - by adsorbing, adding e.g., propane gas to effect decomposition with catalyst and no ammonia and heat exchanging